Appendix 1. Nomenclature notes on *Euphorbia regis-jubae* Webb & Berthel.

As part of the massive task of Webb & Berthelot (1836–1850) to write their *Phytographia Canariensis* (hereafter *Phytographia*[1]) as a complete account for the flora of the Canary Islands, two field botanists, Jean-Marie Despréaux (1794–1843) and Eugène Bourgeau (1813–1877), were hired to collect plant material throughout the archipelago (Santos-Guerra, 2022). Their collections were added to those that resulted from the expeditions made by Webb and Berthelot in the Canaries between 1828 and 1830. Despréaux undertook only one trip to these islands (between 1833 and 1839), but Bourgeau visited the archipelago twice: Between 1845 and 1846 and in 1855 (Santos-Guerra, 2022). Therefore, the second of his trips happened after Webb passed away and the collected material was not part of the *Phytographia*.

The core of the herbarium material examined by Webb and Berthelot for their Canary Island studies is housed in the Herbarium Webbianum (part of the FI herbarium), and there are duplicates mostly in BM, G, K, MPU or P. These herbaria were contacted for typification studies; however, potential type specimens were only found in FI, where three collections that initially appeared to be suitable as potential lectotypes were located (Molero & Rovira, 1998). The first of these collections is mounted in a sheet (number 165288) that has three fragments. One of them (in

[1] The *Phyographia* was part of the multivolume work *Histoire Naturelle des Îles Canaries* (hereafter *Histoire Naturelle*) published by Webb & Berthelot (1835–1850).

the upper right part of the sheet) is in poor conditions but it is interpreted to belong to the Madeira endemic *Euphorbia piscatoria* as it has a label that reads: “Euphorbia piscatoria? planta certo a Madera ex H. Botánico Regio Londinensi, d. 17 Augusti 1841." The two other fragments are placed in the lower part of the sheet, are better preserved, and belong to *E. regis-jubae* Webb & Berthel.; morphologically, they match plants from Lanzarote or southern Gran Canaria. These two fragments include two labels that read: "Euphorbia jubae-regis Nob." and "Euphorbia Reg. Jub. Webb culta in Hort. R. Matr. sub nom. E. mauritanica d. 29 Julii 1850 glandula lutea;" therefore, this material comes from plants cultivated in Madrid, and it was collected in 1850; at least three years after the species description was published by Webb and Berthelot between September 1846 and February 1847. Therefore, material mounted in this sheet is not suitable for typification.

The second sheet (number FI000282, barcode) has two fragments, and they are in bad condition. Their two labels indicated that they were collected by Bourgeau, and they read: “Euphorbia regis-jubae Webb les cotes maritime de Gde. Canaria Avril 1846” and “E. Bourgeau, Plantae Canarienses, Nº 983 Euphorbia regis jubae Webb, Phyt. Can. 3m. Sect., pag. 250 Canaria-ad littora San Matteo Aprile 1846.” Their collections dates are too close to that of the species description; therefore, this material was also disregarded for typification.

The third sheet (number 165289) has six fragments with similar morphology that we interpret as belonging to a single gathering. This sheet has three labels that read: “Euphorbia jubae-regis Nob [Webb’s handwriting]," "Nº 103 Gde. Canaria [Despréaux’s handwriting]," and "Euphorbia piscatoria Tabayba Canariensium Tabayba Salvaje Nivariensium Hab. a mari usque ad regionem Persearum [Webb’s handwriting]." Apparently, two of these labels have contradictory information, as that written by Despréaux indicates that the material came from Gran Canaria whilst, one of those prepared by Webb refers both to Tenerife (known also as Nivaria) and Gran

Canaria. This second label matches well part of the protologue that reads: "Tabayba selvage[2] Nivariensium.- Tabayba mora Canariensium" indicating the species is known in Tenerife under the common name of tabaiba salvaje, and as tabaiba mora in Gran Canaria; therefore, we interpret this label to give an account of common names, as well as on the geographical distribution of the species from near the coast to higher elevation forested areas where the Macaronesian endemic tree *Persea indica* (L.) Spreng. (Lauraceae) can be found ("Hab. a mari usque ad regionem Persearum"). Fragments found in a pouch attached to the sheet, as well as one of the six mounted fragments (on the left-bottom of the sheet) have inflorescences that show the diagnostic cyathial glands with horns that feature *E. regis-jubae*. The specimen also shows small subcyathial raylet bracts suggesting that the material came from a young individual. After consulting the catalogue of calligraphy of labels of specimens housed in the Herbarium Webbianum (Steinberg, 1973) we are certain that the label that assigns number "103" to this specimen was written by Despréaux. As already indicated this French botanist visited the Canaries between 1833 y 1839; therefore, the material reached Webb's herbarium at least eight years before Webb and Berthelot described *E. regis-jubae*. Based on this evidence Molero & Rovira (1998) designated this specimen as the lectotype of this species name.

The protologue of *Euphorbia regis-jubae* has some insights regarding how Webb and Berthelot understood the taxonomy and distribution of dendroid spurges from Macaronesia. Firstly, there is no reference to the presence of *E. regis-jubae* in Fuerteventura; therefore, we can assume that Webb and Berthelot never studied material of this species from this island. "Euphorbia mauritanica" is also mentioned in the protologue, and it is included in the list of synonyms of *E. regis-jubae* (i.e., *Euphorbia mauritanica*. Nob., Florul. Lancerottae Geogr. Bot., pagg. 31, 32, 33,

[2] Written as "selvaje" in Webb & Berthelot (1846–1847: p. 250), but as "selvage" in the herbarium label.

var. est foliis floralibus valde dilatatis). *Euphorbia mauritanica* L. concerns a southern Africa species that is the type of *Euphorbia* subsect. *Africanae* Molero & Barres (Leach, 1975; Riina et al., 2013: p. 338). Unfortunately, the specific epithet is confusing as it can be interpreted to refer to a species from northwestern Africa instead of one from southern areas of this continent. To further complicate the use of this name, Lamarck's (1788: p. 418) account for *E. mauritanica* was really to the Canarian endemic *E. lamarckii* Sweet which is closely related to *E. regis-jubae* (Molero & Rovira, 2004, Barres et al., 2017). The brief text that Webb and Berthelot devoted to this taxon is also rather enigmatic, as they used the abbreviation "Nob." [= "Nobis" that translates "for us"] after the species name; however, the abbreviation "nob." is also used by them throughout the *Phytographia* to refer to the species newly described in this work. However, in this particular case, we interpret this text to read: "*Euphorbia mauritanica* sensu Webb & Berthelot." The brief morphological description that they provided for *E. mauritanica* concerns plants with wide bracts (i.e., "var. est foliis floralibus valde dilatatis") that were observed in Lanzarote. This description matches the aforementioned taxon *E. obtusifolia* f. *latibracteata* Kunkel (accepted name *E. regis-jubae*) that was described for this island by Kunkel (1978).

The protologue of *Euphorbia regis-jubae* also lists *E. piscatoria* Aiton[3] as a synonym indicating that the record of the latter for the Canaries made by Link (in Buch, 1825: p. 158) is not correct, and that it concerns *E. regis-jubae*. However, Link's reference for *E. piscatoria* is only for La Palma, where *E. regis-jubae* does not occur; nevertheless, as already mentioned Webb and Berthelot mistakenly indicated that this species was part of the flora of this island. It seems that Webb and Berthelot were not certain about how to taxonomically interpret *E. piscatoria* and its presence in the Canaries. For instance, the species name is written on one of the three labels of the

[3] *Euphorbia piscatoria* is a Madeira endemic.

lectotype of *E. regis-jubae*, and a full entry for *E. piscatoria* is found in the *Phytographia* in which they seem not to rule out this species as a floristic element of the Canary Islands; although, they acknowledged that they were only familiar with specimens collected in Madeira in 1828[4] (Webb & Berthelot, 1846–1847: pp. 249–250). Furthermore, the legend of one of the plates published of the *Atlas* of the *Histoire Naturella* that are devoted to the genus in the Canaries identified one of the depicted species as *E. piscatoria* (Webb & Berthelot, 1835–1837: Series 3, Plate 2; Fig. 9). Subsequently, they indicated that this initial taxonomic identification was incorrect and that the plant illustrated in the *Atlas* corresponds to *E. obtusifolia* Poir.– Accepted name *E. lamarckii* (Webb & Berthelot, 1846–1847: p. 251). Regarding the use of the epithet "*regis-jubae*," it is worth mentioning that Sunding (1972) in his influential and seminal work on the vegetation of Gran Canaria used the name "*Euphorbia obtusifolia* var. *regis-jubae*" throughout this publication without indicating an author for this taxon. As far as we are aware this intraspecific name has never been published. Furthermore, Sunding (1972) does not refer to this name as a new infraspecific combination under the species *obtusifolia*. Therefore, he used an invalid name (*nomen nudum*) when he referred to *E. obtusifolia* var. *regis-jubae* in this vegetation treatment.

Appendix 2. Phytosociology of *Euphorbia regis-jubae*

In the lower areas and in the midlands of the Canaries, within the arid to dry Infra- to Thermomediterranean belts, *Euphorbia regis-jubae* is associated with succulent or shrubby scrubs where different *Euphorbia* endemics can be found (order *Kleinio neriifoliae-Euphorbietalia*

[4] Webb made a short visit to Madeira in 1828, before reaching the Canary Islands on May of this year (Relancio Menéndez & Breen, 2006: 56).

canariensis). It is also present in communities belonging to the order *Rhamno crenulatae-Oleetalia cerasiformis*, such as thermo-sclerophyllous woodlands of *Olea* and *Juniperus* [including Canary palm-tree (*Phoenix canariensis* H. Wildpret, Arecaceae) stands], as well as scrubs of *Retama rhodorhizoides* (Webb & Berthel.) Webb & Berthel. (Fabaceae), *Rhamnus crenulata* Aiton (Rhamnaceae), or *Hypericum canariense* L. (Hypericaceae). It can also thrive on eroded soils mainly dominated by species of *Micromeria* Benth. (Lamiaceae) and *Cistus* L. (Cistaceae) of the order *Micromerio hyssopifoliae-Cistetalia canariensis*. In addition, it is present in communities occurring on nitrophilic soils belonging to the order *Forsskaoleo angustifoliae-Rumicetalia lunariae*. In the southern slopes of Gran Canaria, *E. regis-jubae* can reach the potential area of the Canary pine forest and/or the drier zone of the laurel forest, within the warmest environments of *Micromerio benthamii-Telinetum canariensis* subass. *euphorbietosum regis-jubae* (*Andryalo pinnatifidae-Ericetalia arboreae*) (Naranjo Cigala et al., 2001, Arco Aguilar et al., 2006). This species also lends its name to the association *Euphorbietum regis-jubae*, a xeric crassicaule shrubland, dominated by *E. regis-jubae*. It constitutes a substitutional shrubby stage of diverse potential communities within the hyperarid to dry Infra- and Thermomediterranean belts, which is not under the influence of the fresh and cool cloud zones. Furthermore, the endemic rock-rose scrub of Gran Canaria is called *Euphorbio regis-jubae–Cistetum canariensis* (Salas et al., 1998; Arco Aguilar & Rodríguez, 2018). Finally, together with *E. lamarckii* they name the alliance *Euphorbion regisjubo-lamarckii* which includes all the potential and serial dendroid *Euphorbia* spp. shrubby communities from the hyperarid to lower-dry Inframediterranean, as well as shrublands of *Plocama pendula* Ait., Rubiaceae (Arco Aguilar & Rodríguez, 2018).

These mainland populations are mostly part of the order *Acacio gummiferae-Arganietalia spinosae* (Hiperarid, arid and semiarid and Infra- and Thermo-Mediterranean). Here, *E. regis-*

jubae is considered characteristic of the *Senecio antheuphorbii-Arganion spinosae* alliance (Barbero et al., 1982), and gives its name to the sub-association *Euphorbio beaumerianae-Arganietum spinosae* subass. *euphorbietosum regis-jubae*, a community typical of rocky stands more or less covered by sand near the coast.[5] Further south, in more arid and warmer conditions, *E. regis-jubae* participates in the association *Euphorbio echini-Arganietum spinosae*, and in the region of Sidi Ifni considered part of the *Polycnemo fontanesii-Arganietum spinosae* (Peltier & Msanda, 1995). Other mainland communities where this species grows include *Artemisio hugueti-Traganopsidetum glomeratae* on sandstones substrates, *Crepidi pinnatae-Warionetum saharae* on quartzites and sandstones, and stands dominated by *Euphorbia balsamifera* Aiton in the Sahara Desert environments (Barbero et al., 1982; Peltier & Msanda, 1995; Taleb & Fennane, 2019). The broad ecogeographical distribution of this species makes it to also grow in rupicolous communities; for example, on quartzites and sandstones such as *Scillo latifoliae-Saturejetum monanthae* (Médail & Quézel, 1999) or on warm cliffs north of Safi that belong to *Aeonio arborei-Sonchetum pinnatifidi*. Finally, *E. regis-jubae* can sometimes be found in halophilous coastal communities such as *Limonio mucronati-Astydamietum latifoliae* (Géhu & Biondi, 1998).

Appendix 3. Examined herbarium material of *Euphorbia regis jubae* Webb & Berthel.

[5] Taleb & Fennane (2019: 31) reported the subassociation *euphorbietosum regis-jubae* within the association *Arganio spinosae-Euphorbietum beaumierinae* Peltier 1982; however, it appears that these names have not been effectively published as they are part of a doctoral dissertation (Peltier, 1982). Indeed, *Arganio spinosae-Euphorbietum beaumierinae* subass. *euphorbietosum regis-jubae* is treated as a synonyn of *Euphorbio beaumerianae-Arganietum spinosae* subass. *euphorbietosum regis-jubae*.

Morocco. Agadir: Mont Maka, Ain-Tarhosenest, 275 m, 30-03-1922, *R. Maire*, MPU; Boulhant, *pr.* Chewat, 21-04-1924, forma ecornea, *R. Maire*, MPU; Maïdret, 300 m, 30-04-1933, *R. Maire*, MPU; Acif-u-Ait-Ameur, 1-04-1934, *R. Maire*, MPU; Sidi-Ifni, 14-VI-1934, *A. Caballero*, G; Aourioura, 12.-04-1935, *R. Maire*, MPU; Cap Rhir, 19-08-1951, *Bauh 543*, M; 60 Km SW Goulimine an der Strasen nach Tan-Tan, 150 m, 10º 30'W – 28º 46'N, 12.IV.1986, *D. Podlech 40611*, M, G303805, LIE; 43 KM W Goulimine an der Piste nach Foum Assaka, 10119'W 29104'N, 13-04-1986, *D. Podlech 40629*, M, G, RSA; Cap Rhir, 55 km NW Agadir, 10-100 m, 8-IV-1986, *D. Podlech 40155,* G303803; 8 km W Tiznit and der strabe nach Sidi-Ifni, 220 m, 1-V-1989, *D. Podlech 45657*, G 360244; Cap Rhir, ca. 50 Km NE Agadir, 9151'W 30º 38'N, 10-07-1989, *Lippert 25276*, M; Agadir, prop del far de Cap Rhir, penyasegats i dunes litorals, 30º 46' N – 7º, 17' W, 50 m, 07-06-1989, *C. Benedí, G. Montserrat & J.M. Montserrat 2427*, BCN 55558; Cap Rhir, ca. 55 Km nodöstl. Agadir, 9153'W 30140'N, 20 m, 24.IV.1990, *F. Schuhwerk 90/209*, M; Inter Mirhert et Bou Izarkarn, prope Et Tleta des Akhsass, 29RMN24, ad 750 m, in fissuris rupium calcareum, 29-04-1992, *J. Fernández-Casas 13678 & J. Molero*, BCN 26265; Prope Tan-Tan, 29RLM84, ad 30 m, in pascuis apricis persiccis, solo sabuloso, 29-04-1992, *J. Fernández Casas 13867 & J. Molero*, BCN 26266; Cap Rhir, a 20 km d'Agadir, roques ventejades, 30 m, 17-05-1994, *J. Molero*, BCN 55547; Tiznit, 8 km W of Tiznit, between Tiznit and Tadouarte, 29º 44'18.7''N-9º 45'41.4''W, 190 m, 9-07-2008, *R. Riina & M. Portilheiro*, BCN 59862. **Doukkala**: Falaise de Safi, 8-07-1917, *Ducellier*, MPU; Safi, 30-03-1927, *Emberger*, RAB; Baie de Tafelney, Essaouira, 31-03-1948, *Sauvage*, RAB; Steilküste nördlich Safi, 30 m, 11-04-1967, *Merxmüller 22323 & Oberwinkler*, M; A 8 km de Tamri cap a Essauira, lloc pedregós àrid, 17-05-1994, *J. Molero*, BCN 55548. **Goulimine**: In planitie pr. Tiznit, solo lapidoso calcareo, 11-IV-1934, *E. Wilczek*, G; Tiznit, 14-04-1934, *R. Maire*, MPU; Anti-Atlas occidental, rochers au dessus du Mighel, 800-890 m, 24-

4-1934, *Emberger*, RAB; Ca. 40 Km WSW Goulimine and der strase nach Tan-Tan, 10º 25'W – 28º 49'N, 220 m, 26-03-1990, *F. Schuhwerk 90/248*, M; 33 Km de Tan-Tan cap a Goulimine, 4-12-1990, *J. Herrero, J. Pedrola & J. Vallés*, BCN 55545. **Mogador**: Gorges de Chiclat, 04-1919, *R. Maire*, MPU; Ibid., 21-03-1931, *E. Jahandiez 8*, BM, MA 74693. **Tarfaya**: Dj. Sidi Tual, 29º 10' N - 10º 0'W, 16-04-1935, *P. Font-Quer*, BC 812240; Pr. Zoco Had el Bifurna, 29º 30'N - 9º 5' W, 28-04-1935, *P. Font-Quer*, BC 812244; Sidi-Ifni, 29º 23' N - 10º 10'W , 9-IV-1935, *P. Font-Quer*, BC 812242; 3 Km S Tan-Tan, Steillabbrüche zum 2 Km Oued Ben-khlil, 11º 19'W - 28º 25'N, 60-100 m, 29-03-1990, *F. Schuhwerk 90/385*, M; Tilenssen, 30 Km SW Tan-Tan, 10º 53W - 28º 16'N, 2-04-1990, *F. Schuhwerk 90/507,* M; 43 Km SW Tan-Tan, pr. Tarfaya, 11º 38'W - 28º 14'N, 20 m, 27-03-1990, *F. Schuhwerk 90/299*, M; Oued Aabar, ca. 7 Km N der strase von Tan-Tan nach Smara, 11º 25'W - 28º 00'N, 40-60 m, 31-03-1990, *F. Schuhwerk 90/473*, M; prope Tan-Tan, 29RLM84, ad 30 m, in pascuis apticis persiccis, *J. Fernández Casas 13687 & J. Molero*, BCN 26266, BC s/n; Mirhleft, entre Tiznit y Sidi-Ifni, 2-09-1990, *Herrero, Pedrola & Vallés*, BCF 38323; 6 km al NW de Tiznit, 200 m, estepa árida, 19-10-1994, *Gómiz*, BC s/n; Gelmin hacia Tan-Tan, 28º 49,107'N – 10º 22,511'W, suelo arenoso, 175 m, 7-05-2011, *J. Alarcón, J. Aldasoro & J. Molero*, BCN 126736; A 40 km al S de Tan-Tan, playa hacia Tarfaya, 28º 15,428' N – 11º 36,352' W, depresión arenosa junto a *E. balsamifera*, 7-05-2011, *J. Alarcón, J. Aldasoro & J. Molero*, BCN 126733. **Spain (Canary Islands). Fuerteventura**: Lobos, 5-04-1955, *E. R. Sventenius*, ORT 24042, ORT 1295; Rincón de Tetir, 21-05-1966, *E. R. Sventenius*, ORT 21669; Betancuria, parte superior del Barranco Grande, 10-05-1969, *E. R. Sventenius*, ORT 21668; Macizo de Jandía, Tarajalejo, 11-02-1973, *Aldridge 813*, BM; Puerto de la Peña, coast Betancuria, 13-03-1973, *Aldridge 834*, BM; Corralejo, Montaña Roja, 16-02-1973, *Aldridge 879*, BM; Isla de Lobos, 20-02-1973, *Aldridge*, BM; Risco Carnicero entre Vega de Río Palmas y Betancuria, 30-02-1975,

Pérez de Paz & Acebes, TFC 4581. **Gran Canaria**: ad littora San Matheo, IV.1846, *Bourgeau 983*, K; Barranco de la Virgen, 6.V.1855, *Bourgeau 1513*, K, P; Arucas, 30.IV.1890, *Murray,* K; Las Palmas, 2.V.1892, *Murray*, G, BM; Tafira, 450 m, 30.V.1900, *J. Bornmüller*, G, P; San Bartolomé, 100 m, II.1906, *Pitard*, P; Las Palmas, 24.IX.1957, *Hepper 906*, K; Guayadeque, barranco lateral, 8-05-1963, *E.R. Sventenius*, ORT 7668; Barranco de Cantera, 14-VI-1971, *E.R. Sventenius*, LPA 11599; Barranco de La Palma, 14-02-1973, *E.R. Sventenius*, LPA 11595; Barranco de Tejeda, 14-03-1973, *E.R. Sventenius*, LPA 11593; Barranco de Tauro, 24-05-1971, *E.R. Sventenius*, LPA 11598 and LPA 11589; Barranco de Sao, 26-08-1971, *E.R. Sventenius*, LPA 11588 and 11592; Barranco de Arguineguín, 8-03-1972, *E.R. Sventenius*, LPA 11587 and LPA 11597; Degollada de Honda, 10-01-1973, *E.R. Sventenius*, LPA 11586 La Calzada, 250 m; 23-III-1966, *G. Kunkel 8903*, G; Tafira Alta, 300 m, 2.I.1967, apéndices de las glándulas subespatulados, *Kunkel 9687*, G, M; Fataga, 950 m, 14-I-1971 [f. *latibracteata* Kunkel], *Kunkel 13685*, G; Caldera de los Marteles, 1625 m, 26-IX-1973, fasciation, "Duque Ellington," *G. Kunkel 15899*, G; Pinar de Tamadaba, NW isla, 23.III.1973, *Beltrán*, TFC 8460; Carretera de Fataga, NO, 450 m, 15.IV.1976, *Beltrán, Méndez, M. del Arco & Acebes*, TFC 6155; Agaete, 800 m, 30.XI.1979, *A.R. Smith*, K; Barranco de Guayadeque, 1.IX.1989, *Amor & Pérez de Paz*, TFC 30543; San Nicolas de Tolentino, de Artejévez a Degollada de la Aldea, 28RDR2193, orientación SE, 13.VI.1990, *A. Alías & J.M. Montserrat 2725*, BCN 55541; Arucas hacia Cambalud, 220 m, 8-06-1990, *J. Molero*, BCN 55449; Cruce de Tasarte, Degollada de Veneguera, a 15 Km de Mogán, SW, 670 m, 9.VI.1990, *J. Molero*, BCN 55561; Valsequillo de Gran Canaria, Barranco de San Miguel, SW, 550 m, 9.VI.1990, *J. Molero*, BCN 55455; A 10 Km de San Nicolás viniendo de Agaete, N, 540 m, *J. Molero*, BCN 49654; Agaete, a 3 km hacia San Nicolás, 150 m, 8-06-1990, *J. Molero*, BCN 55542; Agaete, hacia Blancas, Barranco de La Palma, SE, 280 m, 8.VI.1990, *J. Molero*, BCN 55540; Entre Gáldar y

Agaete, S, 200 m, 8.VI.1990, *J. Molero*, BCN 55444; El Corredor Verde, cerca de San Nicolás, N, 570 m, 9.VI.1990, *J. Molero*, BCN 55539; El Goro, hacia Telde, 160 m, 9.VI.1990, *J. Molero*, BCN 55454; Santa Cruz de Tejeda, 1230 m, 9.VI.1990, *J. Molero*, BCN 55453; Entre San Bartolomé y Santa Lucía, 850 m, en jaral de *Cistus monspeliensis*, 9-06-1990, BCN 55447; Entre San Bartolomé y Maspalomas, Fataga, DR48, 400 m, 9.VI.1990, *J. Molero*, BCN 55452; Cruz de Tejeda, 1500 m, 9.VI.1990, *J. Molero*, BCN 55451; Cruz de Tejeda, 1230 m, 9.VI.1990, *J. Molero,* BCF 37876; Tenoya, al norte de las Palmas, 150 m, 9.VI.1990, *J. Molero*, BCN 55450; Entre San Bartolomé y Santa Lucía, 880 m, 9.VI.1990, *J. Molero*, BCN 55447; Carretera de Santa Lucía de Tirajana a Sardina, 287 m, 24-03-2014, *J. Molero & A. Rovira*, BCN 128408; Vega de San Mateo, SW, 1000 m, 9.VI.1990, *J. Molero*, BCN 55446; Montaña de Cardones, S, 180 m, 8.VI.1990, *J. Molero*, BCN 55443; Telde, a 5 Km de Valsequillo, SW, 300 m, 9.VI.1990, *J. Molero*, BCN 55448; San Bartolomé de Tirajana, a 2 km hacia Santa Cruz de Tejeda, 850 m, 20-04-1990, *J. Molero*, BCN 55552; San Bartolomé de Tirajana, DR48, 1100 m, 9.VI.1990, *J. Molero*, BCN 55445; Degollada de Veneguera, 20.IV.1991, *Pérez de Paz, Hernández & Pérez*, TFC 32760; Subiendo la Cuesta de Silva hacia Santa María de Guía, 200 m, 21-04-1994, *J. Molero*, BCN 55556; Barranco de Tirajana sobre Sardina, 500 m, 20-04-1994, *J. Molero*, BCN 55549; Sobre las Casas de Veneguera, 410 m, 20-04-1994, *J. Molero*, BCN 55550; Sobre la Bahía del Confital, Los Ojiles, cantiles del Rincón, 130-170 m, 21-04-1994, *J. Molero*, BCN 55555; Sobre Vecindario, Barranco del Polvo, 100 m, 20-04-1994, *J. Molero*, BCN 55553; Las Rosas, hacia Agaete, Barranco de Los Llanos, 120 m, pendiente pedregosa con *Opuntia* sp., *E. aphylla* y *E x marreroi*, 21-04-1994, *A. Marrero & J. Molero*, BCN 55551; Entre Agaete y San Nicolás. El Risco, 200 m, 29-05-1999, *J. Molero & A. Rovira*, BCN 26268; Camino de Tejeda, a 3 km de Antenaria, 1200 m, sotobosque de *Pinus canariensis*, 30-05-1999, *J. Molero & A. Rovira*, BCN 26267; Barranco de Tasarte, entre

Tasarte y Playa de Tasarte, N 27º 54,136' – W 15º 46,317', 309 m, 19-03-2014, *J. Molero 13/2014 & A. Rovira*, BCN 129334; Mogán, Barranco de El Medio Almud, N 27º 48,290' – W 15º 44, 16,9', en ladera orientada al S, 52 m, 21-03-2014, *J. Molero19/2014 & A. Rovira*, BCN 129336; Andén Verde hacia Aldea, N 28º 1,673' – W 15º 46,176', sobre el acantilado costero, 579 m, 19-03-2014, J. Molero & A. Rovira 9/2014, BCN 129338; Andén Verde, N 28º 1,846' – W 15º 45,936', ladera orientada al oeste, 557 m, 19-03-2014, *J. Molero9/2014 & A. Rovira*, BCN; Barranco de Guayedra, N 28º 4,713' – W 15º 47,361', en tabaibal, 127 m, 19-03-2014, *J. Molero8/2014 & A. Rovira*, BCN 129339; Barranco de Mogán, hacia Puerto Mogán, N 27º 49,710' – W 15º 45,240', ladera SW, 45 m, 20-03-2014, *J. Molero & A. Rovira*, BCN 129340; Cerca de Tejeda, sobre el embalse de Las Niñas, N 27º 57,172' – W 15º 37,280', 1210 m, 20-03-2014, *J. Molero17/2014 & A. Rovira*, BCN 129341; Las Palmas, Barranco de Guiniguada, ladera izquierda por debajo del Lomo Apolinario, 95 m, 18-03-2014, *A. Marrero, J. Molero3/2014 & A. Rovira*, BCN 129342; Tejeda, base del Roque Nublo, N 27º 58,440' – W 15º, 37,130', en ladera NW, 1252 m, 21-03-2014, *J. Molero18/2014 & A. Rovira*, BCN 129335, BCN 129343; De Santa Lucía de Tirajana a Sardina, N 27º 51,555' – W 15º 2,915', ladera E, 287 m , 24-03-2014, *J. Molero & A. Rovira*, BCN 128408. **Lanzarote**: Hill above Haría, 25-V-1892 [f. *latibracteata* Kunkel], *R.P. Murray*, BM, G; Haría, 23.V.1892, *Murray*, BM; Isla Graciosa, 10.XI.?, *Lowe*, K; Volcán de La Corona prope Haría, 400 m, III.1905, *Pitard*, G, P; La Graciosa, III.1905, *Pitard*, P; Isla Alegranza, II.1905, *Pitard*, P; Rubicón, 600 m, 8.V.1948, *Sventenius*, ORT 22485; Alegranza, Caldera, 14.IV.1954, *Sventenius*, ORT 23442; Montaña Clara, 18.IV.1957, *Sventenius*, ORT 1381; Peñas de Chache, 14.IV.1968, *Sventenius*, ORT 22500; Riscos de Famara, 350 m, 28-V-1975 [f. *latibracteata* Kunkel], *G. Kunkel 18142*, G 119790; Famara, Barranco de la Pocela, 100 m, 3.II.1973, *Aldridge 673*, BM; Los Jameos del Agua, 21.XI.1976, *Fernández & A. Santos*, ORT 24940; María, 9.V.1981, *Cabezudo et al.*, TFC

13865; Los Valles, entre Teguiste y Haría, 28RFT4419, 400 m, 12.VI.1990, *J.M. Montserrat 2704*,BCN 55442; Los Valles, 28RFT4420, 520 m, 12.VI.1990, *J.M. Montserrat 2705*, BCN 55441; Guinate, 28RFT4529, 320 m, 12.VI.1990, *J.M. Montserrat 2710*, BCN 55440; Al SE de Famara, 28RFT4120, 180 m, 12.VI.1990, *J.M. Montserrat 2716*, BCN 55439; Entre Ye y Maguez, 28RFT4629, 420 m, 12.VI.1990, *J.M. Montserrat 2704*, BCN 55438; Montaña Timijedique, 11.I.1992, *Marrero, Carqué & Pérez de Paz*, TFC 35304; Tinajo, Islote Arriba, Betancores, 66 m, 11-03-2008, *F. Oliva & R. Betancort*, LPA 25498; Tinajo, Montaña Bermeja, meseta, 113 m, 25-02-2008, *F. Oliva & R. Betancort*, LPA 025414; El Mojón de Maso, 177 m, *F. Oliva & R. Betancort*, 23-04-2008, LPA 025611; Tinajo, carretera de la Playa de las Malvas hacia la Ermita de Altos de Abajo, 29º 3,173' N – 13º 44,541' W, 103 m, 21-03-2013, *J. Molero & A. Rovira*, BCN 126732; Costa de Teguise hacia Teguise, 29º 1,319' N – 13º 30,621' W, en malpaís, 83 m, 24-03-2013, *J. Molero & A. Rovira*, BCN 126739; Yé, campos del Barrio de Tefio, 29º 11,699' N – 13º 28,808' W, 377 m, *J. Molero & A. Rovira*, BCN 126735; altos del Barranco Chafaris, sobre Tabayesco, 29º 7,334' N – 13º 29,952' W, 470 m, 20-04-2013, *J. Molero & A. Rovira*, BCN 126734.

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